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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/058,830	01/30/2002	Nir Cohen	021756-038500US	2428
20350 7590 02/11/2008 TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834				
EXAMINER NGUYEN, TAN D				
ART UNIT		PAPER NUMBER		
3629				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/058,830

**Applicant(s)**

COHEN ET AL.

**Examiner**

Tan Dean D. Nguyen

**Art Unit**

3629

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3,5-7 and 9-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-7 and 9-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/23/07 has been entered.

### ***Response to Amendment***

2. The amendment of 10/23/07 has been entered. Claims 1-3 (method), 5-7 (system), and 9-11 (method) are pending and rejected below. Claims 4, 8 and 12-14 have been canceled.

### ***Request for Information Under 37 CFR § 1.105***

1. This is a request that applicants provide certain information identified below. If applicants have this information, then applicants are required, under the provisions of 37 CFR 1.56, to disclose the information to the Office. Information on the "Demantra Demand Planner" as indicated on page 1 of the Background of the Invention.
2. Applicants are not required or being asked to conduct a search for information beyond applicants own immediate files. If applicants do not have immediate knowledge of the information requested, then a statement that the information sought is unknown or not readily available to the applicants will be accepted by the office as a complete reply.

**Why the Request for Information is Reasonably Necessary** - it would make the rejections under AAPA clearer.

***Claim Rejections - 35 USC § 112***

3. Claims 1-2, 5-6, and 9-10 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The step of user enter multiplier value (M) specifying how many tasks he wants each computer server to process on average, as shown on page 5, or middle step of Fig. 4, appears to be critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

4. Claims 1-3, 5-7, and 9-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As of 10/23/07, claim 1 is as followed:

1. (Currently Amended) Computer implemented method for computing demand forecast information for a demand forecast application capable of being graphically represented by a demand forecast tree having a single top level node with a plurality of branches directly emanating therefrom each branch of the plurality of branches having at least one node with a time series of observations associated therewith, the method comprising the steps of:

(a) providing a database for storing time series of observations;

(b) providing at least two computer servers for independently computing demand forecast information for one or more branches of the plurality of branches of the demand forecast tree;

c) analyzing a computational demand for each branch of the plurality of branches by determining a number of bottom-level nodes comprising each branch;

d) allocating each branch of the plurality of branches to a task of a plurality of tasks such that a total computational demand for each task of said plurality of tasks is substantially equal among said plurality of tasks, wherein the total computational demand for each task is determined by adding the computational demands for each branch that is allocated to the task of the plurality of tasks;

e) computing demand forecast information from said observations stored in said database using one of said at least two computer servers for at least one a first branch of said plurality of branches of said two branches of the demand forecast tree; and

(f) simultaneously with said one computer server computing demand forecast information from said observations stored in said data base computing demand forecast information from said observations stored in said data base using said other of said at least two computer servers for at least a second branch of said plurality of branches of the demand forecast tree.

Note: for convenience, alphabetical letters (a)-(f) are added to the beginning of each step.

1) Step (d) with the phrase "to a task of a plurality of tasks" is vague and indefinite, and therefore, the whole step appears to be vague and indefinite.

Furthermore, it's not clear how this step is carried out?

2) Claim 3 is vague and indefinite. Claim 3 calls for "further comprising the steps (plural steps) of determining the number of tasks ...and a user entered value...". It appears there is one determining step.

3) Similarly, independent claims 5 and 9, which has similar "allocating step/element" as in the step (d) of claim 1 above, are rejected for the same reason set forth above.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**8. Claims 1-3 (method<sup>1</sup>), 5-7 (system<sup>1</sup>), 9-11 (method<sup>2</sup>) are rejected under 35 U.S.C. 103(a) as being unpatentable over (1) Applicant's Admitted Prior Art (AAPA) in view of (2) FONG et al.**

**As for independent method claim 1**, As shown in the "Background of the Invention" on pages 1-2, **AAPA** fairly teaches the claimed invention except for steps (c ) and (d). As discussed, AAPA mentions the current problem of the demand forecast computing application that the "run time" or "computing time" of the demand forecasting information is intolerably long due to increasing complicated demand forecast trees (strategies) and there is a need to shorten run time. The demand forecast information is computed on the basis of historical time series of observations typically associated with bottom level nodes (tasks) by a forecast engine commercially available, for example, from Demantra Ltd, Israel under the name Demantra TM Demand Planner. One exemplary demand forecast application is the forecast of demand for a consumer item

at an outlet as represented by a bottom level node on the basis of historical sales of the consumer item at the outlet.

In a similar computer-implemented method for load (computing) sharing controller for optimizing resource utilization cost, **FONG et al** fairly teaches the concepts of steps (c) and (d) by analyzing a computation demand for each branch of the plurality of branches by determining a number of bottom level nodes comprising each branch {see Fig. 4, elements 44, 45 and 46 each with 2 bottom level nodes} and allocating the nodes among different parallel jobs/processing systems in order to perform efficient scheduling of the resources (computing processors or servers) {see col. 1, lines 14-67 "...parallel computers...", col. 2, lines 1-67}. Note on lines 45-51, FONG et al also teaches "load sharing" scheduling methodology to balance the load among the nodes and thereby reducing mean response time. Note also, on lines 55-63, FONG et al discloses the partition of the available resources across the different scheduling schemes in a way that meet objectives, maximizing all resource utilization, providing the best overall mean response time, and the optimal system throughput. It would have been obvious to modify the teachings of AAPA by carrying out steps (c) and (d) as taught by FONG et al for efficient scheduling of resources.

As for dep. claims 2-3 (part of 1 above) which deal with allocating tasks for each branch or computing resources, these are shown Figs. 3-4, cols. 5-6.

**As for system claims 5-7**, which are the respective system to carry out the method claims 1-3 above, they are rejected over the system of AAPA in view of FONG



et al to carry out the method claims rejections as shown in the rejections of claims 1-3 above.

**As for method claims 9-11**, which have the same limitations as in method claims 1-3 above, they are rejected for the same rejections of claims 1-3 above. Note also the limitation of claim 11 is taught in col. 2, lines 45-65.

### ***Response to Arguments***

9. Applicant's arguments, see Amendment/Response, filed 10/23/07, with respect to all the previous rejections have been fully considered and are persuasive. However, they are moot in view of the new ground of rejections.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(1) US 5,298,370 by Tang et al, discloses a computer operating process allocating tasks between 1 and 2<sup>nd</sup> processors at run time based upon current processor load.

(2) US 6,363,411 by Dugan et al, discloses an intelligent network for load controlling and management.

(3) US 2002/0062454 by Fung discloses a dynamic power and workload management for multi-server system.

(4) US 2003/0036890 by Billet et al disclose a predictive method comprising decision trees and branches for forecasting purpose which is similar to the teachings of AAPA as cited above.

No claims are allowed.

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11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through private PAIR only. For more information about the PAIR system, see <http://pair-direct@uspto.gov>. Should you have any questions on access to the private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

In receiving an Office Action, it becomes apparent that certain documents are missing, e. g. copies of references, Forms PTO 1449, PTO-892, etc., requests for copies should be directed to Tech Center 3600 Customer Service at (571) 272-3600, or e-mail [CustomerService3600@uspto.gov](mailto:CustomerService3600@uspto.gov).

Any inquiry concerning the merits of the examination of the application should be directed to Dean Tan Nguyen at telephone number (571) 272-6806. My work schedule is normally Monday through Friday from 6:30 am - 4:00 pm. I am scheduled to be off every other Friday.

Should I be unavailable during my normal working hours, my supervisor John Weiss can be reached at (571) 272-6812.

The main FAX phone numbers for formal communications concerning this application are (571) 273-8300. My personal Fax is (571) 273-6806. Informal communications may be made, following a telephone call to the examiner, by an informal FAX number to be given.

dtn  
February 2, 2008

/Tan Dean D. Nguyen/  
Primary Examiner, Art Unit 3629